UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,234	01/23/2004	Rajnish Batlaw	5729	8486

7590 09/28/2005

John E. Vick, Jr.
Legal Department
M-495
PO Box 1926
Spartanburg, SC 29304

EXAMINER	
STAICOVICI, STEFAN	

ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/764,234	BATLAW ET AL.	
	Examiner	Art Unit	
	Stefan Staicovici	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

4a) Of the above claim(s) *9-12, 15, 23-24, 28-29, 31, 38, 40, 43-44, 47-48 and 50-55* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,13,14,16-22,25-27,30,32-37,39,41,42,45,46 and 49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/23/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I, Species A in the reply filed on June 14, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5, 16, 19-22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US Patent No. 3,944,643) in view of Edwards (US Patent No. 3,966,382).

Sato ('643) teaches the basic claimed process of injection stretch blow molding of a polypropylene container including, providing a polypropylene based composition having a melt flow index of 7 g/10 min, injecting said composition into a mold to form a preform and removing said preform to be blow molded in a subsequent molding step (see Abstract and col. 5, lines 64-67).

Regarding claim 1, Sato ('643) does not teach a mold fill rate of at least 5 g/sec. However, it is noted that it is well known that the mold fill rate is dependent on the injection

pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence it is submitted that the mold fill rate is a result effective variable. Therefore, it would have been obvious for one of ordinary skill in the art to have used routine experimentation in the process of Sato ('643) to determine an optimum mold fill rate of at least 5 g/sec because it is well known that the mold fill rate is dependent on the injection pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence the mold fill rate being a result effective variable.

Further regarding claim 1, Sato ('643) does not teach a preform wall thickness of less than 3.5 mm. Edwards ('382) teaches that the wall thickness of a polypropylene preform used in an injection-blow molding process is 0.02 inches (0.5 mm) (see col. 1, line 57 through col. 2, line 15). Therefore, it would have been obvious for one of ordinary skill in the art to have molded a polypropylene preform having a wall thickness of 0.5 mm (less than 3.5 mm) as taught by Edwards ('382) using the process of Sato ('643) because Edwards ('382) specifically teaches that such a value provides for a highly accurate end-product, hence providing for an improved product.

In regard to claim 2, Sato ('643) teaches reheating and stretch-blow molding of the preform to form a container (see Abstract).

Specifically regarding claim 3, although Sato ('643) in view Edwards ('382) teaches a polypropylene preform wall thickness of 0.5 mm, Sato ('643) in view Edwards ('382) does not teach a polypropylene preform wall thickness of 1.5-3.5 mm. However, Edwards ('382) teaches that the preform wall thickness depends on the type of resin, heating temperature, injection

pressure. Hence, it is submitted that in view of the teachings of Edwards ('382), it would have been obvious for one of ordinary skill in the art to have used routine experimentation to determine an optimum wall thickness in the process of Sato ('643) in view Edwards ('382) because, Edwards ('382) teaches that the preform wall thickness depends on the type of resin, heating temperature, injection pressure, hence teaching that the preform wall thickness is a result effective variable.

Regarding claim 4, Sato ('643) in view Edwards ('382) does not teach a mold fill rate of 5-22 g/sec. However, it is noted that it is well known that the mold fill rate is dependent on the injection pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence it is submitted that the mold fill rate is a result effective variable. Therefore, it would have been obvious for one of ordinary skill in the art to have used routine experimentation in the process of Sato ('643) to determine an optimum mold fill rate of 5-22 g/sec because it is well known that the mold fill rate is dependent on the injection pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence the mold fill rate being a result effective variable.

In regard to claim 5, Sato ('643) teaches an ethylene-propylene co-polymer (see col. 6, lines 23-24).

Specifically regarding claim 16, Sato ('643) teaches a polypropylene polymer (homopolymer).

Regarding claim 19, Edwards ('382) teaches a mold gate of about 3 mm (see Figures 2-3).

In regard to claims 20-22, it is noted that the productivity of a molding process is dependent on the material being processed and the molding parameters, hence being a result effective variable. Therefore, it would have been obvious for one of ordinary skill in the art to have used routine experimentation in the process of Sato ('643) in view of Edwards ('382) to determine an optimum production rate because it is well known that the productivity of a molding process is dependent on the material being processed and the molding parameters, hence being a result effective variable.

Specifically regarding claim 25, it is submitted that the container of Sato ('643) in view of Edwards ('382) has a haze ratio of less than about 0.05 haze/mils because the same mateials and process are being used as claimed in the instant invention and as such the resulting molded container has the same properties.

4. Claim 6-8 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (US Patent No. 3,944,643) in view of Edwards (US Patent No. 3,966,382) and in further view of Schmidt *et al.* (US2004/0063830 A1).

Sato ('643) in view Edwards ('382) teach the basic claimed process as described above.

Regarding claims 6-8 and 13-14, Sato ('643) in view Edwards ('382) do not teach the use of a nucleating agent. However, the use of a nucleating agent to improve the transparency of the polypropylene molded container is well known as evidence by Schmidt *et al.* (US2004/0063830 A1) who teaches the use of DBS as a nucleating agent, specifically 1,3-2,4-dimethylbenzylidene (see paragraph [0004]). Therefore, it would have been obvious for one of ordinary skill in the art to have provided DBS as a nucleating agent as taught by Schmidt *et al.* (US2004/0063830 A1) in

the process of Sato ('643) in view Edwards ('382) because, Schmidt *et al.* (US2004/0063830 A1) teaches that DBS (nucleating agent) provides for improved transparency, hence providing for an improved product.

In regard to claims 17-18, although Sato ('643) in view Edwards ('382) teach a polypropylene (homopolymer) composition, Sato ('643) in view Edwards ('382) do not specifically teach a polypropylene random copolymer or a polypropylene block copolymer. Schmidt *et al.* (US2004/0063830 A1) teaches that a polypropylene homopolymer, a random copolymer or a polypropylene block copolymer are equivalent alternatives as injection blow molding materials (see paragraph [0011]). Therefore, it would have been obvious for one of ordinary skill in the art to have provided a random copolymer or a polypropylene block copolymer as an equivalent alternative to a polypropylene homopolymer as taught by Schmidt *et al.* (US2004/0063830 A1) in the process of Sato ('643) in view Edwards ('382) because, Schmidt *et al.* (US2004/0063830 A1) teaches that a polypropylene homopolymer, a random copolymer or a polypropylene block copolymer are equivalent alternatives as injection blow molding materials.

5. Claims 26-27, 32-37, 39, 41-42, 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-125627 in view of Edwards (US Patent No. 3,966,382).

JP 60-125627 teaches the basic claimed process of injection stretch blow molding of a polypropylene container including, providing a polypropylene based composition having a melt flow index of 4-50 g/10 min, injecting said composition into a mold to form a preform and removing said preform to be blow molded in a subsequent molding step.

Regarding claims 26, 41, 45, JP 60-125627 does not teach a mold fill rate of at least 5 g/sec. However, it is noted that it is well known that the mold fill rate is dependent on the injection pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence it is submitted that the mold fill rate is a result effective variable. Therefore, it would have been obvious for one of ordinary skill in the art to have used routine experimentation in the process of JP 60-125627 to determine an optimum mold fill rate of at least 5 g/sec because it is well known that the mold fill rate is dependent on the injection pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence the mold fill rate being a result effective variable.

Further regarding claims 26, 41, 45, JP 60-125627 does not teach a preform wall thickness of less than 3.5 mm. Edwards ('382) teaches that the wall thickness of a polypropylene preform used in an injection-blow molding process is 0.02 inches (0.5 mm) (see col. 1, line 57 through col. 2, line 15). Therefore, it would have been obvious for one of ordinary skill in the art to have molded a polypropylene preform having a wall thickness of 0.5 mm (less than 3.5 mm) as taught by Edwards ('382) using the process of JP 60-125627 because Edwards ('382) specifically teaches that such a value provides for a highly accurate end-product, hence providing for an improved product.

In regard to claim 39, 42 and 46, JP 60-125627 teaches reheating and stretch-blow molding of the preform to form a container (see Abstract).

Specifically regarding claim 33, although JP 60-125627 in view Edwards ('382) teaches a polypropylene preform wall thickness of 0.5 mm, JP 60-125627 in view Edwards ('382) does not

teach a polypropylene preform wall thickness of 1.5-3.5 mm. However, Edwards ('382) teaches that the preform wall thickness depends on the type of resin, heating temperature, injection pressure. Hence, it is submitted that in view of the teachings of Edwards ('382), it would have been obvious for one of ordinary skill in the art to have used routine experimentation to determine an optimum wall thickness in the process of JP 60-125627 in view Edwards ('382) because, Edwards ('382) teaches that the preform wall thickness depends on the type of resin, heating temperature, injection pressure, hence teaching that the preform wall thickness is a result effective variable.

Regarding claims 32, 35-37, JP 60-125627 in view Edwards ('382) does not teach a mold fill rate of 5-22 g/sec. However, it is noted that it is well known that the mold fill rate is dependent on the injection pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence it is submitted that the mold fill rate is a result effective variable. Therefore, it would have been obvious for one of ordinary skill in the art to have used routine experimentation in the process of JP 60-125627 to determine an optimum mold fill rate of 5-22 g/sec because it is well known that the mold fill rate is dependent on the injection pressure, the resin viscosity, the resin temperature, the back-pressure and the sprue cross-section, hence the mold fill rate being a result effective variable.

Regarding claims 27 and 34, Edwards ('382) teaches a mold gate of about 3 mm (see Figures 2-3).

6. Claims 30 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 60-125627 in view of Edwards (US Patent No. 3,966,382) and in further view of Schmidt *et al.* (US2004/0063830 A1).

JP 60-125627 in view Edwards ('382) teach the basic claimed process as described above.

Regarding claims 30 and 49, although JP 60-125627 teaches the use of a nucleating agent, JP 60-125627 in view Edwards ('382) do not teach a specific nucleating agent. However, the use of a nucleating agent to improve the transparency of the polypropylene molded container is well known as evidence by Schmidt *et al.* (US2004/0063830 A1) who teaches the use of a variety of nucleating agents including the claimed nucleating agents. Therefore, it would have been obvious for one of ordinary skill in the art to have provided the nucleating agent taught by Schmidt *et al.* (US2004/0063830 A1) in the process of JP 60-125627 in view Edwards ('382) because, Schmidt *et al.* (US2004/0063830 A1) teaches that a nucleating agent provides for improved transparency, hence providing for an improved product.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Staicovici, Ph.D. whose telephone number is (571) 272-1208. The examiner can normally be reached on Monday-Friday 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael P. Colaianni, can be reached on (571) 272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Stefan Staicovici, PhD

Stefan Staicovici

Primary Examiner 9/25/05

AU 1732

September 23, 2005